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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,610	03/20/2001	Julio Huato	3639-0101P	9560
30593	7590	12/19/2003	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			CHOI, FRANK I	
P.O. BOX 8910			ART UNIT	
RESTON, VA 20195			PAPER NUMBER	

1616

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/811,610	HUATO ET AL.	
	Examiner	Art Unit	
	Frank I Choi	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/14/2003.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17,19,21 and 23-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17,19,21 and 23-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17, 19, 21, 23- 30 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the specified anions which are insoluble or slightly soluble, does not reasonably provide enablement for anions in general. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

Examiner has duly considered Applicant's arguments but deems them unpersuasive for the reasons set forth in the prior Office Actions and the further reasons below.

The nature of the invention:

The invention is directed to a colloidal copper which by the claim definition can contain any anion falling within A and, optionally B.

The state of the prior art and the predictability or lack thereof in the art:

The prior art appears to indicate that not all copper salts will produce colloidal copper (US Pat. 4,681,530, Column 7, lines 43-60). Further, Applicant has admitted that soluble copper compounds will not form colloids. However, including copper citrate which is listed as a soluble compound is claimed by Applicant to form a colloid. See arguments set forth Advisory Action (6/13/2003). As such, predictability in the art appears to be low.

The amount of direction or guidance present and the presence or absence of working examples:

The Specification only provides a limited number of working examples of "A" and none of "B".

The breadth of the claims and the quantity of experimentation needed:

The claims are broad in that B anions are undefined and A anions include anions which Applicant has argued are soluble and thus do not form colloids. As such, it appears that one of ordinary skill in the art would be required to do undue experimentation in order to determine what anions would be suitable for preparing the colloid.

Claims 1-8,17,19,21, 28,29 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-8, 17,19,21 recite the limitation wherein the colloidal cupric compound does not fall out of the solution", however, the Specification indicates that addition of organic solvent will cause the colloidal cupric compounds to precipitate, i.e. fall out of solution. Claims 26-30 recite a different formula having coefficients z, x and y and indicates that x is an integer greater than 0 and y is an integer selected from 0 and integers greater than 0. However, as originally filed the end point for x and y was 2. As such, the amendment above does not appear to have been contemplated at the time Application was filed.

Claims 28, 29 recite ozone and hypochlorites, however, there does not appear to be support for the same in the Specification. As such, the amendment above does not appear to have been contemplated at the time Application was filed.

Claim 29 recites ammonia, sodium carbonate as weak bases to achieve a pH of 5. However, in the specification sodium bicarbonate is used and ammonia is associated with a pH

of 3 not 5. . As such, the amendment above does not appear to have been contemplated at the time Application was filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8,17,19,21, 26-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-8,17,19,21 lack antecedent basis for the phrase "fall out of solution".

Claims 26-30 lack antecedent basis for the coefficient "z".

Claims 28, 29 appear to lack antecedent basis for ozone and hypochlorites.

Claim 29 appears to lack antecedent basis for ammonia, sodium carbonate.

Claim 30 appears to lack antecedent basis for the retentate.

Claims 26-30 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the anions listed for A. The specification does not appear to indicate that the anions for A can be chosen from other than what was listed in Claim 1. As such, the same appears to be critical to the invention and should be set forth in the claims.

Claims 1-8,17,19,21, 26-30 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that the claims fail to correspond in scope with that which applicant(s) regard as the invention can be found in Amendment filed 5/13/2003. In that paper, applicant has stated that soluble copper compounds, including copper citrate, do not form colloids, and this statement indicates that the invention is different from what is defined in the claim(s) because Applicant claims colloids

contain compounds which Applicant has argued do not form colloids. Further in Amendment (10/14/2003) Applicant states that the present invention colloids are formed at dimensions on the order of 1 micron or less which is different from the claimed invention with respect to claims 1-8, 17,19,21,26-30 in that they do not claim dimensions of 1 micron or less.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

With respect to the rejections below, Examiner has duly considered Applicant's arguments but deems them unpersuasive for the reasons set forth in the Advisory Action (6/13/2003). Examiner reminds Applicant that in a 102/103 inherency based rejection the Graham v. John Deere factors are inapplicable. The burden is on Applicant to show that the prior art compositions are actually different from the claimed composition. Applicant argues that the colloids of the invention do not exhibit the flocculation or aggregation inherent in conventional "colloidal" compositions. However, has made no showing that the colloid compositions cited below which contain the same components as the claimed invention act differently from the colloids of the present invention.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brasch (US Pat. 4,681,630).

Brasch expressly discloses a colloidal copper prepared from copper sulfate pentahydrate and method of preparing the same falling within the scope of applicant's claims (Column 6, lines 40-66). Examiner notes that claims 1-8 are drawn to a composition, as such, although the process of making the composition is different in certain aspects, since the composition appears to be the same, i.e., a copper colloid, the prior art composition appears to anticipate the composition claims.

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978) and *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Claims 1-8, 17, 18, 23, 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 96/10918

WO 96/10918 expressly discloses an aqueous colloidal suspension containing a cupric salt, such as cupric nitrate, copper sulfate, copper chloride, having a pH of about 7 which is used to protect plants from fungi falling within the scope of applicant's claims (See Pgs. 3, 4).

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978); *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Claims 1-8, 17, 19, 21,23-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Casale (Abstract).

Casale expressly discloses a colloidal suspension prepared from CuSO₄ pentahydrate containing citric acid which is effective against vine disease falling within the scope of applicant's claims (Abstract).

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978); *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Paal et al. (Abstract) or Bannigan, Jr. (US Pat. 4,253,843).

Paal et al. expressly discloses a colloidal copper hydroxide prepared from copper sulfate falling within the scope of applicant's claims (Abstract).

Bannigan, Jr. expressly discloses a colloidal copper phosphate prepared from copper sulfate falling within the scope of applicant's claims (Column 4, lines 40-46).

Alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention. See *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980). See also *In re May*, 197 USPQ 601, 607 (CCPA 1978); *Ex parte Novitski*, 26 USPQ2d 1389, 1390-91 (Bd Pat. App. & Inter. 1993).

Art Unit: 1616

Conclusion

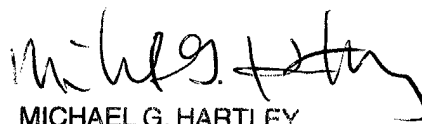
A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (703) 308-0067. Examiner maintains a flexible schedule. However, Examiner may generally be reached Monday-Friday, 8:00 am – 5:30 pm (EST), except the first Friday of the each biweek which is Examiner's normally scheduled day off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Thurman Page, can be reached on (703) 308-2927. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (703) 308-1235 and (703) 308-0198, respectively.

FIC

December 15, 2003



MICHAEL G. HARTLEY
PRIMARY EXAMINER